

ABSTRACT

A flexible conductor core for superconducting power cable, characterized by a central tubular element on which the superconducting tapes are placed, in the shape of a spiral or helix, in at least two layers with a calculated angle of lay length, being one of the sections of the layers of the superconducting tapes laid in a direction opposite to the other section, wherein the laying length of all the layers varies from a maximum  $P_{\max 1}$  (1000 cm) and  $P_{\max 2}$  (1000 cm) in the intermediate layers to a  $P_{\min 1}$  (2 cm) and  $P_{\min 2}$  (2 cm) in the external layers, while the laying angle of the tapes of all the layers varies from  $\alpha_{\max 1}$  ( $45^\circ$ ) to  $\alpha_{\min 1}$  ( $0^\circ$ ).